

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of the claims in the application:

Listing of Claims:

1. (Currently Amended) A method for detecting overlay errors, the method comprising ~~the steps of~~ directing a primary electron beam to interact with an inspected object; ~~whereas~~ the inspected object ~~comprises~~ having a first feature formed on a first layer of the inspected object and a second feature formed on a second layer of the inspected object, wherein the second feature is buried under the first layer and ~~wherein the second feature~~ affects a shape of an area of the first layer, but the first feature and second feature are not overlapping; detecting electrons reflected or scattered from the area of the first layer; and receiving detection signals from at least one detector and determining overlay errors.
2. (Currently Amended) The method of claim 1 wherein ~~whereas~~ at least some of the directed electrons are reflected or scattered at small angle in relation to the inspected object.
3. (Currently Amended) The method of claim 1 wherein the step of directing ~~further comprising~~ comprises directing electrons of the primary electron beam to interact with the second feature.
4. (Currently Amended) The method of claim 3 wherein the step of detecting ~~further~~ comprises detecting electrons reflected or scattered from the second feature.
5. (Original) The method of claim 1 further comprising a preliminary step of charging the second feature.
6. (Currently Amended) A method for detecting overlay errors, ~~the method comprising the steps of~~ directing a primary electron beam to interact with a first feature and a second feature of an inspected object; ~~whereas~~ wherein the first feature is formed on a first layer of the inspected

object and the second feature formed on a second layer of the object, ~~wherein~~ the second feature is buried under the first layer, but the first feature and second feature are not overlapping; detecting electrons reflected or scattered from the first and second features; and receiving detection signals from at least one detector and determining overlay errors.

7. (Original) The method of claim 6 wherein at least some of the detected electrons are reflected or scattered at small angle in relation to the inspected object.

8. (Original) The method of claim 6 wherein the second feature affects a shape of an area of the first layer.

9. (Currently Amended) The method of claim 6 wherein ~~the step of~~ detecting comprises detecting electrons reflected or scattered from the area of the first layer.

10. (Original) The method of claim 6 further comprising a preliminary step of charging the second feature.

11. (Currently Amended) A system for overlay error measurements, ~~the system comprises~~ comprising: means for directing a primary electron beam to interact with an inspected object; ~~whereas the inspected object comprises~~ having a first feature formed on a first layer of the inspected object and a second feature formed on a second layer of the inspected object, wherein the second feature is buried under the first layer, but the first feature and second feature are not overlapping; at least one detector for detecting electrons reflected or scattered from the inspected object, ~~whereas~~ wherein at least some of the directed electrons are reflected or scattered at small angle in relation to the inspected object; and a processor, coupled to the at least one detector, for receiving detection signals from the at least one detector and determining overlay errors.

12. (Currently Amended) The system of claim 11 wherein ~~whereas~~ the at least one detector is positioned ~~such as~~ to detect electrons that are reflected or scattered at small angle in relation to the inspected object.

13. (Original) The system of claim 11 wherein the means for directing are capable of directing electrons to interact with the second feature.

14. (Currently Amended) The method of claim 13 wherein the at least one detector is positioned ~~such as~~ to detect electrons reflected or scattered from the second feature.

15. (Currently Amended) A system for detecting overlay errors, the system comprises: means for directing a primary electron beam to interact with a first feature and a second feature of an inspected object, ~~whereas~~ the first feature ~~is~~ formed on a first layer of the inspected object and the second feature formed on a second layer of the inspected object, wherein the second feature is buried under the first layer, but the first feature and second feature are not overlapping; at least one detector for detecting electrons reflected or scattered from the first and second features; and a processor, coupled to the at least one detector, for receiving detection signals from the at least one detector and determining overlay errors.

16. (Currently Amended) The system of claim 15 wherein the at least one detector is positioned ~~such as~~ to detect electrons ~~are~~ reflected or scattered at small angle in relation to the inspected object.

17. (Original) The system of claim 15 wherein the second feature affects a shape of an area of the first layer.

18. (Currently Amended) The system of claim ~~15~~ 17 wherein the at least one detector is positioned ~~such as~~ to detect electrons reflected or scattered from the area of the first layer.